

IV. Remarks

Claims 1-46 were previously pending. By this paper, Claims 1-3, 15-20, and 23-24 are canceled without prejudice to or disclaimer of the subject matter recited therein.

Claims 4, 8, 13, 21, 29, and 38 have been amended. No new matter has been added by the amendments. It should be noted that the amendments to Claims 4, 8 and 21 are limited to re-writing these claims in independent form. It is believed that no substantive amendments were made to Claims 4, 8 and 21.

Reconsideration of Claims 4-14, 21-22, 25-46 in light of the above amendments and the following remarks is respectfully requested.

Rejection of Claim 13 under 35 USC 112

Claim 13 has been amended to depend from Claim 12. The limitation “the search section comprises” now has sufficient antecedent basis. Accordingly, Applicants request that the §112 rejection of Claim 13 be withdrawn.

Features of Present Application

The common feature of the claimed inventions is the establishing of a direct communication in a first protocol (e.g., IPv6) between a client device in a first network (e.g., a home network) and a server in a second network (e.g., the Internet). An embodiment of this feature is shown in Figure A below in a simplified view. As shown in Figure A, a client device on a home network can directly communicate using IPv6 with a server which is located in a global network (the Internet) via a tunneling connection, bypassing the switching equipment of carriers and the servers of ISPs. If the Internet uses IPv4 protocol, such direct communication in IPv6 was not possible prior to the present invention. As explained in paragraph 0012 with reference to an embodiment of the invention, “terminal (client) devices present in the home network can be uniquely recognized and controlled from outside via the server. Since all communications are performed via the server on the Internet regardless of the carrier and the ISP, the terminal device and all connections to the terminal device can be freely configured and controlled by the owner or the manufacturer of the server on the Internet.”

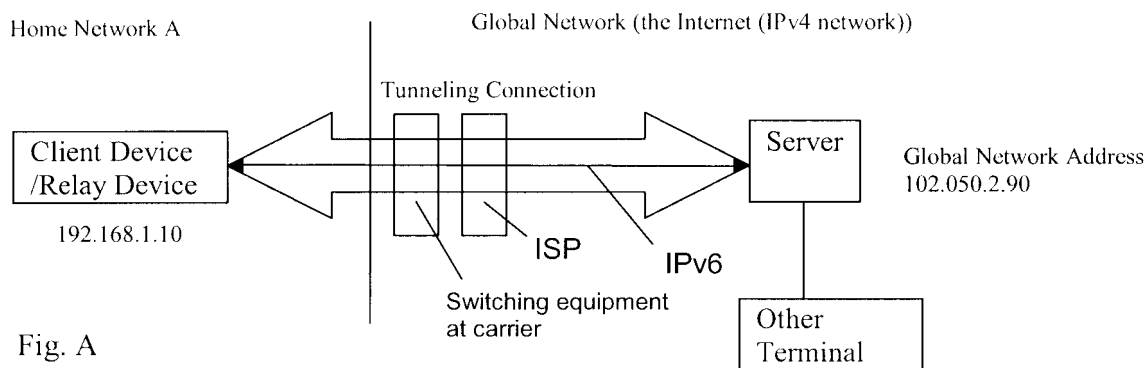


Fig. A

Claim Rejections under 35 U.S.C. §102

The Office Action indicated that Claims 1-5, 8-11, 19 and 21-24 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent application No. 2002/0073215 A1 to Huitema et al. (“Huitema”). Claims 1-3, 19, 23 and 24 have been cancelled without prejudice and will not be addressed. Applicants respectfully traverse the rejection of Claims 4, 5, 8-11 and 21-22 for the reasons set forth below.

Claims 4 and 5

The server in the Internet connection system of Claims 4 and 5 at least requires the limitation of “a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model.” Paragraphs 0025-0026 of Huitema, which the examiner pointed out, indicates that IPv4/IPv6 filter device 410 determines whether an IPv6 packet is encapsulated within an IPv4 packet it accepts. Huitema’s device 410 can make determinations on the type of a data packets: the packet being either a non-capsulated IPv4 packet or an encapsulated IPv6 packet. However, Huitema’s device 410 does not make any identification or determination of the model of a client device or a relay device or any other device.

Furthermore, Applicants respectfully disagree with the examiner’s interpretation of “predetermined model”. As stated on page 5 of the Office action: “Examiner interprets predetermined model as determining the version of the IP packet which will indicate the type of device sending the packet.” Applicants believe that the term “model” for a device normally means a manufacture-specific machine type and should not be interpreted as an IP version supported by a device.

Paragraph 0056 of the present application, with reference to the embodiment shown in Figure 1, describes an example of this model identification feature as follows: “the InterBOX 3 (a relay device of Claim 4) and the InterServer 6 (the server connected to the relay device) are intended to be produced by the same manufacturer or under a unified standard, and are designed to interface with each other.” Stored in the InterBox 3 is a global address of the InterServer 6 with IPv4 so that the InterBox 3 can be always routed and connected to the InterServer 6 regardless of the carrier or ISP. Additionally the IPv6 terminal 2 connected to the IPv6 home network 1 is also intended to be produced by the same manufacturer as that of the InterBox 3 or under a unified standard, and configured so that a type (model) or the like of the IPv6 terminal 2 is identifiable on the InterServer 6 based on, for example, an IPv6 global address assigned to the IPv6 terminal 2. (Emphasis added).

Concerning the limitation of Claim 5, Huitema does not disclose a communication session disconnection section of the present invention. The IPv4/IPv6 filter device 410 of Huitema does not disconnect or limit transmission of data packets that it receives. The IPv4/IPv6 filter device 410 simply strips IPv4 data if a packet is encapsulated IPv6 data and delivers to its destination included in the IPv6 data, and as for non-encapsulated IPv4 packets, the IPv4/IPv6 filter device 410 simply passes them through to respective destination devices.

Claims 21 and 22

For the same reasons as stated above with respect to Claims 4 and 5, it is believed that Claims 21 and 22 are patentable over Huitema, since Huitema does not disclose the model identification section claimed in Claim 21 or the communication session disconnection section claimed in Claim 22.

Claims 8 and 9

For similar reasons as stated above with respect to Claims 4 and 5, it is believed that Claims 8 and 9 are patentable over Huitema, since Huitema does not disclose the network type identification section claimed in Claim 8, which determines if an environment of the first network connected with the client device and/or the relay device is of a predetermined type. In this case, determining if an environment of the first network is of a predetermined type should not be interpreted as determining whether an IPv6 packet is encapsulated with the IPv4 packet. Paragraph 0098 of the present application describes an example of the network identification section, with reference to the embodiment of Figure 3, as follows: "The IPv6 terminal model identification section 21 is configured to determine the model of the IPv6 terminal 2 and a network environment based on, for example, the IPv6 address of the IPv6 terminal (address itself or information associated with the address)."

Claim 9, which depends on Claim 8, further recites a communication session disconnection section, which disconnects the communication sessions or limits packet transmissions if the network environment connected with the client device or the relay device is not of the predetermined type. This feature is not disclosed by Huitema.

Claims 10 and 11

Applicant's claims 10 and 11 are patentable at least because they depend from patentable claim 8.

Rejections under 35 U.S.C. §103(a) (Huitema in view of Hovell)

The Office Action indicated that Claims 6, 17, 25, 26, 28-31, 37-40, 43 and 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Huitema in view of U.S. Patent No. 7,188,191 B1 to Hovell, et al ("Hovell"). By this paper, Claim 17 has been cancelled without prejudice and will not be addressed. Applicants respectfully traverse the rejection of Claims 6, 25, 26, 28-31, 37-40, 43, and 45 for the reasons set forth below.

Claim 6

The Internet connection system of Claim 6 requires a server further comprising a command conversion section for converting a command to be sent to the client device to a command in a predetermined format to control the client device based on results from the model identification section. The examiner rejected Claim 6 citing Col. 7, Lines 63 - Col. 8, Line 13 of Hovell. However, the cited section is related to protocol conversion used in Network Address Translation-Protocol Translation, and not related to a conversion of a command for controlling a client device. An example of this command conversion section is explained in paragraph 0099 of the present application, with reference to the embodiment shown in Figure 2, as follows: "When a special command is required to manage the IPv6 terminal 2 (client device), the command setup section 22 converts a command included in the communication from the IPv6 server 7 to a

command specific to the model.” (Emphasis added). As explained above, Hovell does not disclose the command conversion section of Claim 6 and does not supply the required features missing from Huitema, namely, “a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model.”

Based on the foregoing reason, the combination does not render claim 6 obvious. Accordingly, Applicants request withdrawal of the rejection of Claim 6 under 35 U.S.C. § 103(a) over Huitema in view of Hovell.

Claim 25

For the same reasons stated above with respect to Claim 6, Applicants submit that Claim 25 is allowable over Huitema in view of Hovell. Because Claims 26 - 45 depend from and further limit Claim 25, Applicants submit that Claims 26 - 45 are also allowable.

Rejections under 35 U.S.C. §103(a) (Huitema in view of Simpson)

Claims 7, 12, 14, 15, 32, 33, 36 and 41 were rejected over Huitema in view of U.S. Patent 6,405,310 B1 to Simpson (“Simpson”). Claim 15 has been cancelled without prejudice and will not be addressed. Applicants respectfully traverse the rejection of Claims 7, 12, 14, 32, 33 and 36 for the reasons set forth below.

Simpson does not supply the required features of Claims 7, 12, 14, 32, 33 and 36 that are missing from Huitema (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model). Accordingly, Applicants request withdrawal of the rejection of Claims 7, 12, 14, 32, 33 and 36 under 35 U.S.C. § 103(a) over Huitema in view of Simpson.

Rejections under 35 U.S.C. §103(a) (Huitema-Simpson in view of Tarr)

Claims 13, 34 and 35 were rejected over Huitema-Simpson in view of U.S. Patent

6,978,314 B2) to Tarr (“Tarr”). Tarr does not supply the required features of Claims 13, 34 and 35 that are missing from Huitema and Simpson (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model). Accordingly, Applicants request withdrawal of the rejection of Claims 13, 34 and 35 under 35 U.S.C. § 103(a) over Huitema-Simpson in view of Tarr.

Rejections under 35 U.S.C. §103(a) (Huitema-Simpson in view of Zenchelsky)

Claims 16 and 42 were rejected over Huitema-Simpson in view of U.S. Patent 6,233,686 B1) to Zenchelsky (“Zenchelsky”). Claim 16 has been cancelled without prejudice and will not be addressed. Zenchelsky does not supply the required features of Claim 42 that are missing from Huitema and Simpson (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model). Accordingly, Applicants request withdrawal of the rejection of Claim 42 under 35 U.S.C. § 103(a) over Huitema-Simpson in view of Zenchelsky.

Rejections under 35 U.S.C. §103(a) (Huitema-Hovell in view of Zenchelsky)

Claims 18 and 44 were rejected over Huitema-Hovell in view of Zenchelsky. Claim 18 has been cancelled and will not be addressed. Zenchelsky does not supply the required features of Claim 44 that are missing from Huitema and Hovell (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model). Accordingly, Applicants request withdrawal of the rejection of Claims 18 and 44 under 35 U.S.C. § 103(a) over Huitema-Hovell in view of Zenchelsky.

Rejections under 35 U.S.C. §103(a) (Huitema in view of Zenchelsky)

Claims 20 and 46 were rejected over Huitema in view of Zenchelsky. Claim 20 has been cancelled and will not be addressed. Zenchelsky does not supply the required features of

Claim 46 missing from Huitema (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model).

Accordingly, Applicants request withdrawal of the rejection of Claim 46 under 35 U.S.C. § 103(a) over Huitema in view of Zenchelsky.

Rejection under 35 U.S.C. §103(a) (Huitema-Hovell in view of Tarr)

Claim 27 was rejected over Huitema-Hovell in view of Tarr. Tarr does not supply the required features of Claim 27 that are missing from Huitema-Hovell (e.g., a model identification section for determining if the client device is of a predetermined model and/or the relay device is of a predetermined model). Accordingly, Applicants request withdrawal of the rejection of Claim 27 under 35 U.S.C. § 103(a) over Huitema-Hovell in view of Tarr.

V. Conclusion

In view of the foregoing amendment and remarks, it is believed that the claims in this application are now in condition for allowance. Early and favorable reconsideration is respectfully requested.

A telephone interview is respectfully requested to discuss any remaining issues in an effort to expedite allowance of this application. To that end, the Examiner is invited to contact the undersigned at 972-739-6927.

Respectfully submitted,



W. Kirk McCord
Registration No. 29, 192

Dated: June 22, 2009
HAYNES AND BOONE, LLP
Telephone: 972-739-6927
IP Facsimile No. 214-200-0853
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Randi Ross-Quick